**Assisted project-1**

**1.Write a program in Java to perform implicit and explicit type casting**

**package** BasicConcepts;

**public** **class** TypeCastExample {

**public** **static** **void** main(String[] args) {

**char** ch = 'B';

**int** constant = ch;

System.***out***.println("constant :"+constant);

**int** num = 65;

**char** constant1 = (**char**)num;

System.***out***.println("constant1 :"+constant1);

**byte** num1 = 20;

**byte** num2 = 30;

**byte** sum = (**byte**)(num1+num2);//converting large data to small is ---Explict.

**int** result = num1+num2;

System.***out***.println("result : "+result);

//Implict

**int** a = 44;

**float** b = 32.9f;

**float** ans = a + b;

System.***out***.println("ans : "+ans);

//explict

**int** Sum = (**int**)(a + b);

System.***out***.println("Sum :"+Sum);

}

}

**Output:**

constant :66

constant1 :A

result : 50

ans : 76.9

Sum :76

**Assisted project-1**

**2.Write a program in Java to verify the working of access modifiers**

//1. Class is having Default access modifier

**class** defAccessSpecifier

{

**void** display()

{

System.***out***.println("You are using defalut access specifier");

}

}

**public** **class** accessSpecifiers1 {

**public** **static** **void** main(String[] args) {

//default

System.***out***.println("Default Access Specifier");

defAccessSpecifier obj = **new** defAccessSpecifier();

obj.display();

}

}

//2. using private access specifiers

**class** priaccessspecifier

{

**private** **void** display()

{

System.***out***.println("You are using private access specifier");

}

}

**public** **class** accessSpecifiers2 {

**public** **static** **void** main(String[] args) {

//private

System. .***out***.println("Private Access Specifier");

priaccessspecifier obj = **new** priaccessspecifier();

//trying to access private method of another class

//obj.display();

}

}

//3. using protected access specifiers

**package** pack1;

**public** **class** proaccessspecifiers {

**protected** **void** display() {

System.***out***.println("This is protected access specifier");

}

}

//create another package

**package** pack2;

**import** pack1.\*;

**public** **class** accessSpecifiers3 **extends** proaccessspecifiers {

**public** **static** **void** main(String[] args) {

accessSpecifiers3 obj = **new** accessSpecifiers3 ();

obj.display();

}

}

//4. using public access specifiers

**package** pack1;

**public** **class** pubaccessspecifiers {

**public** **void** display()

{

System.***out***.println("This is Public Access Specifiers");

}

}

//create another package

**package** pack2;

**import** pack1.\*;

**public** **class** accessSpecifiers4 {

**public** **static** **void** main(String[] args) {

pubaccessspecifiers obj = **new** pubaccessspecifiers();

obj.display();

}

}

**Output:**

Default access specifiers

You are using default access specifier

This is protected access specifier

This is public access specifier

**Assisted project-3**

**3. Write a program in Java to create methods**

**public** **class** methodExecution {

**public** **int** multipynumbers(**int** a,**int** b) {

**int** z=a\*b;

**return** z;

}

**public** **static** **void** main(String[] args) {

methodExecution b=**new** methodExecution();

**int** ans= b.multipynumbers(10,3);

System.***out***.println("Multipilcation is :"+ans);

}

//call by value

**public** **class** callMethod {

**int** val=150;

**int** operation(**int** val) {

val =val\*10/100;

**return**(val);

}

**public** **static** **void** main(String args[]) {

callMethod d = **new** callMethod();

System.***out***.println("Before operation value of data is "+d.val);

d.operation(100);

System.***out***.println("After operation value of data is "+d.val);

}

}

//method overloading

**public** **class** overloadMethod {

**public** **void** area(**int** b,**int** h)

{

System.***out***.println("Area of Triangle : "+(0.5\*b\*h));

}

**public** **void** area(**int** r)

{

System.***out***.println("Area of Circle : "+(3.14\*r\*r));

}

**public** **static** **void** main(String args[])

{

overloadMethod ob=**new** overloadMethod();

ob.area(10,12);

ob.area(5);

}

}

**Out put:**







**Assisted project-4**

**4. Write a program in Java to create constructors**

//default constructor

**class** EmpInfo{

**int** id;

String name;

**void** display() {

System.***out***.println(id+" "+name);

}

}

**public** **class** constructorDemo {

**public** **static** **void** main(String[] args) {

EmpInfo emp1=**new** EmpInfo();

EmpInfo emp2=**new** EmpInfo();

emp1.display();

emp2.display();

}

}

//parameterized constructor

**class** Std{

**int** id;

String name;

Std(**int** i,String n)

{

id=i;

name=n;

}

**void** display() {

System.***out***.println(id+" "+name);

}

}

**public** **class** paramConstrDemo {

**public** **static** **void** main(String[] args) {

Std std1=**new** Std(2,"Alex");

Std std2=**new** Std(10,"Annie");

std1.display();

std2.display();

}

}

**Output:**





**Assisted project-5**

**5. Write a program in Java to create collections**

**import** java.util.\*;

**public** **class** collectionAssisted {

**public** **static** **void** main(String[] args) {

//creating arraylist

System.***out***.println("ArrayList");

ArrayList<String> city=**new** ArrayList<String>();

city.add("Bangalore");//

city.add("Delhi");

System.***out***.println(city);

//creating vector

System.***out***.println("\n");

System.***out***.println("Vector");

Vector<Integer> vec = **new** Vector();

vec.addElement(15);

vec.addElement(30);

System.***out***.println(vec);

//creating linkedlist

System.***out***.println("\n");

System.***out***.println("LinkedList");

LinkedList<String> names=**new** LinkedList<String>();

names.add("Alex");

names.add("John");

Iterator<String> itr=names.iterator();

**while**(itr.hasNext()){

System.***out***.println(itr.next());

//creating hashset

System.***out***.println("\n");

System.***out***.println("HashSet");

HashSet<Integer> set=**new** HashSet<Integer>();

set.add(101);

set.add(103);

set.add(102);

set.add(104);

System.***out***.println(set);

//creating linkedhashset

System.***out***.println("\n");

System.***out***.println("LinkedHashSet");

LinkedHashSet<Integer> set2=**new** LinkedHashSet<Integer>();

set2.add(11);

set2.add(13);

set2.add(12);

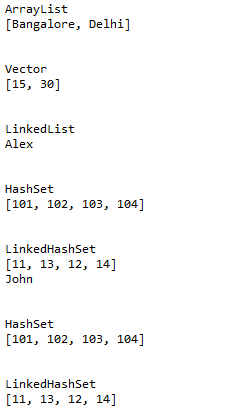
set2.add(14);

System.***out***.println(set2);

}

}

**Output:**

}

**Assisted porject-6**

**6.Write a program in Java to create maps**

**import** java.util.\*;

**public** **class** mapDemo {

**public** **static** **void** main(String[] args) {

// map

//Hashmap

HashMap<Integer,String> hm=**new** HashMap<Integer,String>();

hm.put(1,"Tim");

hm.put(2,"Mary");

hm.put(3,"Catie");

System.***out***.println("\nThe elements of Hashmap are ");

**for**(Map.Entry m:hm.entrySet()){

System.***out***.println(m.getKey()+" "+m.getValue());

}

//HashTable

Hashtable<Integer,String> ht=**new** Hashtable<Integer,String>();

ht.put(4,"Ales");

ht.put(5,"Rosy");

ht.put(6,"Jack");

ht.put(7,"John");

System.***out***.println("\nThe elements of HashTable are ");

**for**(Map.Entry n:ht.entrySet()){

System.***out***.println(n.getKey()+" "+n.getValue());

}

//TreeMap

TreeMap<Integer,String> map=**new** TreeMap<Integer,String>();

map.put(8,"Annie");

map.put(9,"Carlotte");

map.put(10,"Catie");

System.***out***.println("\nThe elements of TreeMap are ");

**for**(Map.Entry l:map.entrySet()){

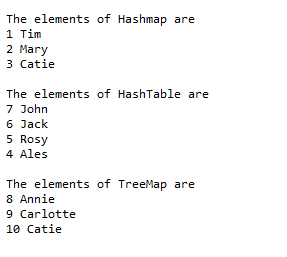
System.***out***.println(l.getKey()+" "+l.getValue());

}

}

}

**Output:**

**::**

**Assisted project-7**

**7.Write a Java program to create inner classes**

**public** **class** innerClassAssisted1 {

**private** String msg="Welcome to Java";

**class** Inner{

**void** hello(){System.***out***.println(msg+", Let us start learning Inner Classes");}

}

**public** **static** **void** main(String[] args) {

innerClassAssisted1 obj=**new** innerClassAssisted1();

innerClassAssisted1.Inner in=obj.**new** Inner();

in.hello();

}

}

**public** **class** innerClassAssisted2 {

**private** String msg="Inner Classes";

**void** display(){

**class** Inner{

**void** msg(){

System.***out***.println(msg);

}

}

Inner l=**new** Inner();

l.msg();

}

**public** **static** **void** main(String[] args) {

innerClassAssisted2 ob=**new** innerClassAssisted2 ();

ob.display();

}

}

//anonymous inner class

**abstract** **class** AnonymousInnerClass {

**public** **abstract** **void** display();

}

**public** **class** innerClassAssisted3 {

**public** **static** **void** main(String[] args) {

AnonymousInnerClass i = **new** AnonymousInnerClass() {

**public** **void** display() {

System.***out***.println("Anonymous Inner Class");

}

};

i.display();

}

}

**Output:**







**Assisted project-8**

1. **Write a Java program to create strings and convert them into StringBuffer and**

**String Bulider**

**public** **class** stringDemo {

**public** **static** **void** main(String[] args) {

//methods of strings

System.***out***.println("Methods of Strings");

String sl=**new** String("Hello World");

System.***out***.println(sl.length());

//substring

String sub=**new** String("Welcome");

System.***out***.println(sub.substring(2));

//String Comparison

String s1="Hello";

String s2="Heldo";

System.***out***.println(s1.compareTo(s2));

//IsEmpty

String s4="";

System.***out***.println(s4.isEmpty());

//toLowerCase

String s5="Hello";

System.***out***.println(s1.toLowerCase());

//replace

String s6="Heldo";

String replace=s2.replace('d', 'l');

System.***out***.println(replace);

//equals

String x="Welcome to Java";

String y="WeLcOmE tO JaVa";

System.***out***.println(x.equals(y));

System.***out***.println("\n");

System.***out***.println("Creating StringBuffer");

//Creating StringBuffer and append method

StringBuffer s=**new** StringBuffer("Welcome to Java!");

s.append("Enjoy your learning");

System.***out***.println(s);

//insert method

s.insert(0, 'w');

System.***out***.println(s);

//replace method

StringBuffer sb=**new** StringBuffer("Hello");

sb.replace(0, 2, "hEl");

System.***out***.println(sb);

//delete method

sb.delete(0, 1);

System.***out***.println(sb);

//StringBuilder

System.***out***.println("\n");

System.***out***.println("Creating StringBuilder");

StringBuilder sb1=**new** StringBuilder("Happy");

sb1.append("Learning");

System.***out***.println(sb1);

System.***out***.println(sb1.delete(0, 1));

System.***out***.println(sb1.insert(1, "Welcome"));

System.***out***.println(sb1.reverse());

//conversion

System.***out***.println("\n");

System.***out***.println("Conversion of Strings to StringBuffer and StringBuilder");

String str = "Hello";

// conversion from String object to StringBuffer

StringBuffer sbr = **new** StringBuffer(str);

sbr.reverse();

System.***out***.println("String to StringBuffer");

System.***out***.println(sbr);

// conversion from String object to StringBuilder

StringBuilder sbl = **new** StringBuilder(str);

sbl.append("world");

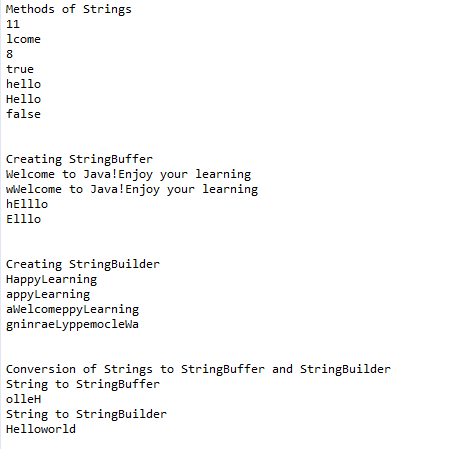
System.***out***.println("String to StringBuilder");

System.***out***.println(sbl);

}

}

**Output:**



**Assisted project-9**

**9.Write a Java program to create arrays**

**package** minarray;

**public** **class** minarray{

**public** **static** **void** main(String args[]) {

**int** i=0;

**int** a[]=**new** **int**[] {10,2,44,6,8,9};

**int** min=a[0];

**for**(i=0;i<a.length;i++) {

**if**(a[i]<min)

min=a[i];

}

System.***out***.println("smallest element given in array:"+min);

}

}

**Output:**

smallest element given in array:2

**Assisted project-10**

**10.Write a Java program to search a specific string from a given set of strings using regular expressions**

**import** java.util.regex.\*;

ekr

**public** **class** regularExpnAssisted {

**public** **static** **void** main(String[] args) {

String pattern = "[a-z]+";

String check = "Regular Expressions";

Pattern p = Pattern.*compile*(pattern);

Matcher c = p.matcher(check);

**while** (c.find())

System.***out***.println( check.substring( c.start(), c.end() ) );

}

}

**Output:**

